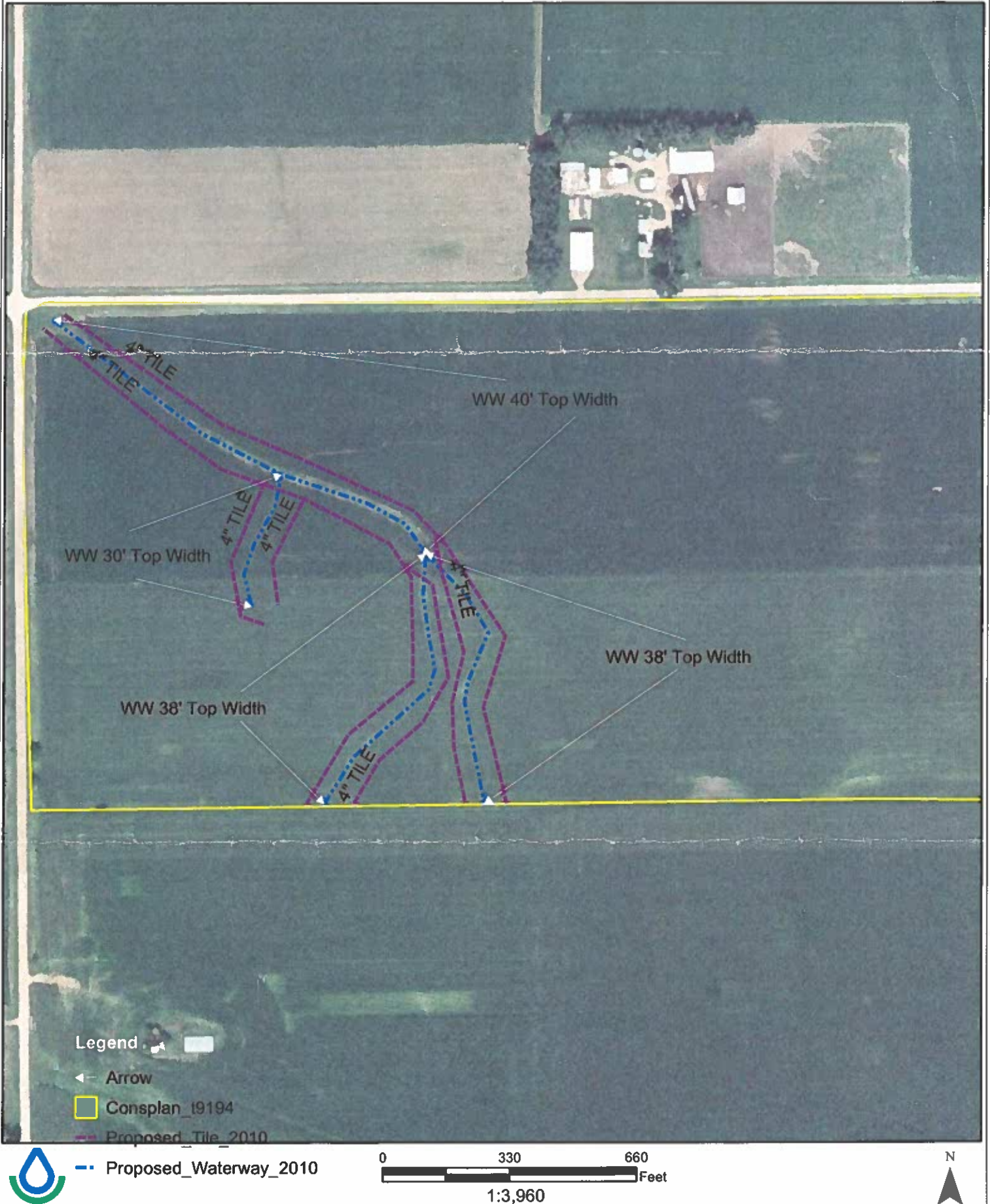


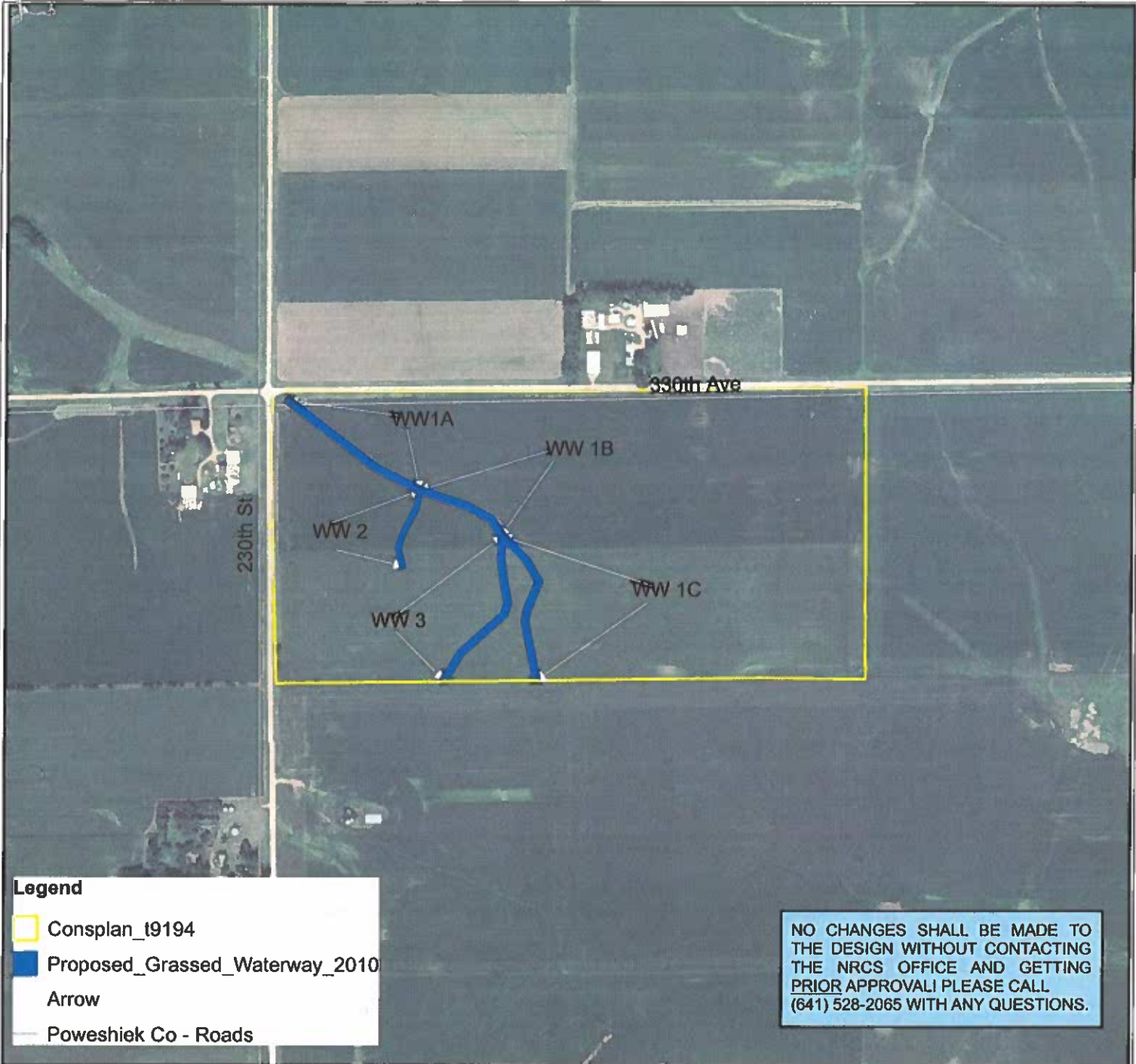
ESTIMATE MAP

Date: 8/12/2010

Customer(s): CLYDE A LEIMBERER
Legal Description: N1/2NW1/4 Jefferson 23 - T81NR13W -F3765 - T9194
District: POWESHIEK SOIL & WATER CONSERVATION DISTRICT

Field Office: MALCOM SERVICE CENTER
Agency: USDA-NRCS
Assisted By: CYNTHIA GATLIN
State and County: IA, POWESHIEK





Legend

- Consplan_t9194
- Proposed_Grassed_Waterway_2010
- Arrow
- Poweshiek Co - Roads

NO CHANGES SHALL BE MADE TO THE DESIGN WITHOUT CONTACTING THE NRCS OFFICE AND GETTING PRIOR APPROVAL! PLEASE CALL (641) 528-2065 WITH ANY QUESTIONS.



1:7,920

I have reviewed and agree with the content of the attached plan prepared by the NRCS.

Landowner: _____ Date: _____

I certify that this practice has been constructed in accordance with the plans and specifications.

Contractor : _____ Date : _____

Technician : _____ Date : _____

CONTRACTOR IS RESPONSIBLE FOR CALLING IOWA ONE CALL 1-800-292-8989

If a cultural resource is identified during construction, stop immediately and notify the Natural Resource Conservation Service Archeologist at (515) 284-4370.



Customer(s): CLYDE A LEIMBERER

Legal Description: N1/2NW1/4 Jefferson 23 T81NR13W - F3765 - T9194

State and County: IA, POWESHIEK

Designed C. Gatlin 11/10/10 Date

Drawn C. Gatlin 11/10/10

Checked ms 11/10

Approved Kevin Shelman 11/10/10

Eng. Job Class

Revision Date

November 2009

Sheet 1 of 22

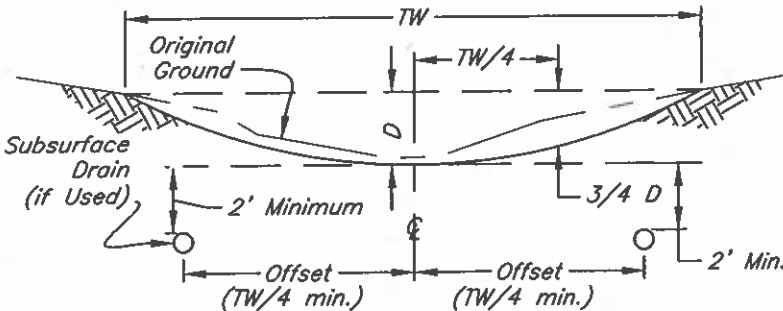
DESIGN DATA

WW ID	Centerline Data		Cut or Fill at \mathcal{C} from None		Reach Length	Grade	Design Top Width (TW)	Design Depth (D)	$\frac{1}{4}$ Top Width ($\frac{TW}{4}$)	$\frac{3}{4}$ Depth ($\frac{3}{4}D$)	Subsurface Drain Installation	
											No. Used (0,1,2)	Offset from w/w \mathcal{C}
	Station	Design Elev.	C/F	feet							feet	%
1A	0+00				765	0.9	40	1.9	10.0	1.4		
	7+65											
1B	7+65				485	0.7	40	2.0	10.0	1.5		
	12+50											
1C	12+50				770	1.7	38	1.4	9.5	1.1		
	20+20											
2	0+00				405	3.2	30	1.0	7.5	0.8		
	4+05											
3	0+00				810	1.8	38	1.3	9.5	1.0		
	8+10											

Notes:

- All work shall comply with Construction Specification IA-412.
- See Sheet 1 of 22 for the Plan View.
- See Sheet(s) N/A of N/A for the Profile(s).
- See Sheet 6 of 22 for the Fabric or Rock Check details.
- See Sheet(s) N/A of N/A for the Subsurface Drain details.

ESTIMATED QUANTITIES		
ITEM	QUANTITY	UNIT
Earthfill (if calculated)	N/A	cu. yd.
Excavation (if calculated)	N/A	cu. yd.
Clearing (if applicable)	N/A	ac.
Waterway Length	3,235	ft.
Waterway Area	2.8	ac.
Seeding Area		ac.
Other:		
Other:		



TYPICAL PARABOLIC CROSS SECTION

BENCH MARK		
ID	Elev.	Description

STANDARD DWG. IA-1510

DATE June 2010 | PAGE 1 OF 4



PARABOLIC GRASSED WATERWAY

Owner: Clyde Leimberer t9194
 Location: Sec. 23, T. 81 N R. 13 W
Jefferson Township
Poweshiek County, Iowa

Date	File Name
Designed <u>C. Gatlin</u> 11/10	IA-157
Drawn <u>C. Gatlin</u> 11/10	Drawing Name
Checked <u>[Signature]</u> 11/10	110810-412
Approved <u>[Signature]</u> 11/10	Sheet 2 of 22

PARABOLIC WATERWAY CHECKOUT SHEET (Continuation)

Notes: _____

Design data from Plan	WW ID	Sta.	℄ Elev.	TW	Depth	Grade (%)	Hub ID	Hub Elev.	Cut/Fill from Hub at ℄	
	1B			40	2.0	0.7				
As-Built Survey Data	Hub Rod Reading			Measured Top Width						X
	Rod Reading									
	Distance			-25	-20	-10	℄	10	20	25
	As-built Depth									
	℄ Rod Reading 50' u.s.			℄ Rod Reading 50' d.s.						

Grade = _____
Construction OK? Y N

Notes: _____

Design data from Plan	WW ID	Sta.	℄ Elev.	TW	Depth	Grade (%)	Hub ID	Hub Elev.	Cut/Fill from Hub at ℄	
	1B			40	2.0	0.7				
As-Built Survey Data	Hub Rod Reading			Measured Top Width						X
	Rod Reading									
	Distance			-25	-20	-10	℄	10	20	25
	As-built Depth									
	℄ Rod Reading 50' u.s.			℄ Rod Reading 50' d.s.						

Grade = _____
Construction OK? Y N

Notes: _____

Design data from Plan	WW ID	Sta.	℄ Elev.	TW	Depth	Grade (%)	Hub ID	Hub Elev.	Cut/Fill from Hub at ℄	
	1C			38	1.4	1.7				
As-Built Survey Data	Hub Rod Reading			Measured Top Width						X
	Rod Reading									
	Distance			-24	-19	-9.5	℄	9.5	19	24
	As-built Depth									
	℄ Rod Reading 50' u.s.			℄ Rod Reading 50' d.s.						

Grade = _____
Construction OK? Y N

Notes: _____

Design data from Plan	WW ID	Sta.	℄ Elev.	TW	Depth	Grade (%)	Hub ID	Hub Elev.	Cut/Fill from Hub at ℄	
	1C			38	1.4	1.7				
As-Built Survey Data	Hub Rod Reading			Measured Top Width						X
	Rod Reading									
	Distance			-24	-19	-9.5	℄	9.5	19	24
	As-built Depth									
	℄ Rod Reading 50' u.s.			℄ Rod Reading 50' d.s.						

Grade = _____
Construction OK? Y N

STANDARD CHECKOUT SHEET
IA-1510C-Continuation

DATE June 2010 PAGE 3 OF 4



Natural Resources Conservation Service
United States Department of Agriculture

PARABOLIC GRASSED WATERWAY CHECK OUT (Cont.)

Owner: Clyde Leimberer 19194

Location: Sec. 23, T. 8J, N. R. 13 W

Jefferson Township

Doweshiak County, Iowa

Surveyed _____ Date _____

Checked _____

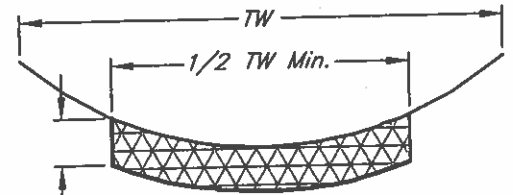
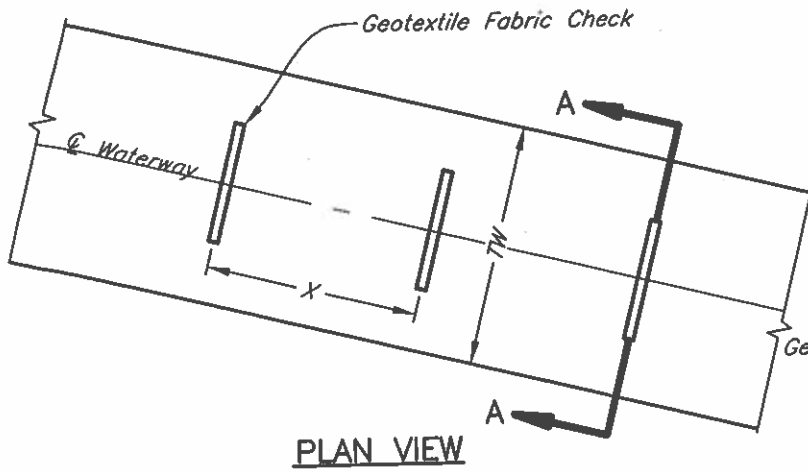
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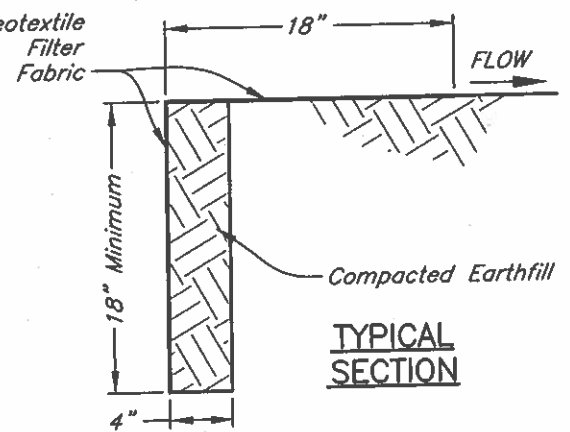
Drawing Name

NA

Sheet 4 of 22



SECTION A-A



TYPICAL SECTION

Notes:

1. Geotextile shall meet the IA-95 Geotextile Construction Specification: Type-Nonwoven, Class 3, 2, or 1.
2. Geotextile fabric checks shall be installed according to the TYPICAL SECTION shown or with a mechanical device (fabric plow) specifically designed for geotextile installation.
3. Compact the geotextile trench in six inch lifts, ensuring the top of the trench is level with the surrounding ground surface.

Geotextile Fabric Check Data							
Waterway Number	Start Station	End Station	Check Spacing (X)	No. of Checks	Geotextile Length (1/2 TW)	Total (lin.ft.)	Total (sq.yd.)
1A	0+00	7+65	50	16	20	320	106.7
1B	7+65	12+50	50	10	20	200	66.7
1C	12+50	20+20	50	16	19	304	101.3
2	0+00	4+05	50	8	15	120	40.0
3	0+00	8+10	50	16	19	304	101.3
TOTALS:						1248	416.0

Waterway Grade	Maximum Spacing between Checks
0 to 1.5 percent	100 Feet
1.5 to 3.0 percent	75 Feet
Greater than 3 percent	50 Feet

IOWA STANDARD DWG. NO. 1506
 DATE Jan. 2009 | PAGE 1 OF 1



PARABOLIC FILTER FABRIC CHECK
 Owner: Clyde Leimberer t9194
 Location: Sec. 23, T 81 N, R 13 West
Jefferson Township
Poweshiek County, Iowa

Designed C. Gallin 11/10 Date
 Drawn C. Gallin 11/10
 Checked [Signature] 11/10
 Approved [Signature] 11/10

File Name IA-157
 Drawing Name 111010-412/2
 Sheet 6 of 22